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THE JAPAN SNOWBALL.

A NATIVE of both China and Japan, and first found in China, yet Viburnum plicatum is now popularly known as the Japan Snowball. It was introduced into England from China in 1846; and in 1847, just fifty years ago, was described in the *Botanical Register*, London. It is only within the past twenty-five years that it has been much disseminated in this country, but increasingly so as its merits have become better known, and it is yet regarded as a new variety, and, in fact, but few, comparatively, have seen it.

The bush is of lower growth and more compact than the old snowball, and better furnished with foliage. The leaves are quite different in form and appearance from the latter. Our common snowball has palmate or three-lobed and coarsely toothed, smooth leaves, while the leaves of the Japan snowball are broadly ovate or obovate, abruptly pointed, and with small or shallow teeth; the leaves, which are somewhat hairy, are also particularly noticeable for their rough or wrinkled surface, as if folded in creases or plaits, hence its name plicatum, folded. The leaves are dark green, and their peculiar surface gives them a very rich appearance.

The individual flowers are somewhat larger than those of the common form and of a purer white. The largest of the clusters or balls are about the same size as those of the old snowball, though not quite uniform in this respect, but as a rule becoming smaller towards the ends of the shoots. The manner of growth or arrangement of the clusters on the two plants is quite distinct: The cluster of the common snowball is borne at the end of a somewhat lengthened and flexible side shoot, and its weight bends down its support, often making it pendulous. This habit of the plant is admirably alluded to by Mrs. Browning in "Aurora Leigh":

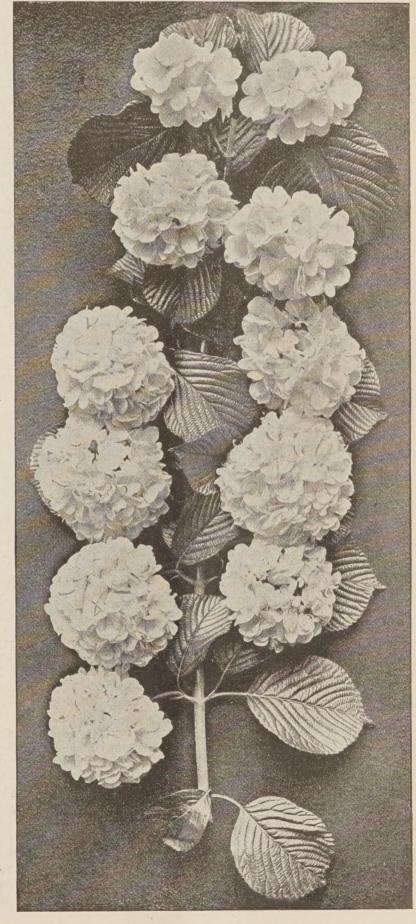
This guelder rose, at far too slight a beck Of the wind, will toss about her flower-apples.

The balls of the Japan plant, as may be noticed in the photo-gravure, are at the ends of very short side shoots, and not at all pendulous; and yet, and though placed so numerously along the branch or year-old shoot, they do not appear to be stiffly disposed, perhaps because of the soft, fluffy, graceful balls themselves, and because the bloom is so abundant and is dispersed so generally over the surface of the plant that the arrangement in detail is subordinate to the general effect.

As already noticed, the shrub does not attain the height of the old snowball, and plants only about three feet high will bloom freely. Both plants bloom at about the same time, the early part of June in this locality, but the flowers of the Japan shrub remain longer in good condition; also, the plant, at all times, is more ornamental than that of the old form. Parsons, in his "Landscape Gardening," says:

Good judges have commended this plant as in many senses the best of deciduous shrubs.

This decision cannot be fully accepted, for it would be manifestly unjust to compare plants of different genera,—a snowball with a spiræa, or a rose with a Forsythia,—but of the two forms of snowball the more recent arrival is far the better, and is not subject to any insect enemy.



HOW ROSES TURNED RED.

There was once a garden where roses grew, White as the lilies so fresh and fair And they loved the sun, and they loved the dew, And loved to swing in the summer air.

But time went along till the day was done, The sun went sleepily down in the west; And the roses cried, as they saw him go, Oh, stay with us, sun, for we love you best!"

So there stayed awhile, with the coming night, Sweet flashes of light that would softly press A kiss on the lips of those roses white, Till their leaves blushed red at the sweet caress.

EDRIC VREDENBURG.

MY SHADY CORNER.

T is formed where the back part meets the main body of the house, shut in from the south and west, and is laid out as shown in the accompanying diagram. The extreme corner receives the direct rays of the sun only for an hour or two in the early morning, the more north-easterly part till about noon.

A few years ago it was an unused space of gravel, stones and rubbish. I had always desired a place in my garden where ferns and other shade-loving plants might find a congenial home; and when the thought came of utilizing this space for that purpose, a willing heart and strong arms came to the rescue, and the work was soon done. The poor soil was dug out not as deep, according to good authority, as it ought to have been, but from fifteen to eighteen inches, and the space filled in with a layer of sods, then good loam, chip dirt and barnyard fertilizer well mixed.

1, 2, 3, 4, are paths two feet wide; the remaining spaces are occupied by plants. The diagonal path (1) was a necessity as being the shortest distance between the back door and the pump. The paths are separated from the beds and border by a row of bricks, placed edgewise in the soil, the tops just even with the surface. The border is only ten inches wide, just escaping the water which during heavy rains often mercilessly pours from the projecting eaves above. A few clumps of lilies of the valley and forget-me-nots were transplanted into this border, but most of the space was reserved for ferns, to secure which I started one morning in the latter part of May, with three merry, wide-awake children, with baskets and trowels, for that oft-visited little brook that flows into the Merrimac.

An El Dorado indeed! For here in sheltered seclusion were ferns and ferns; the graceful maiden-hair, the sturdier sword, and the delicate wood ferns, growing side by side. How beautiful they looked with the dew still fresh upon them! Tenderly and carefully, disturbing the roots as little as possible, we lifted some of them from the moist, rich soil,how fine, and light, and black it was! Would they ever smile again? Not many weeks passed before my silent questioning was answered. They evidently had

The first spring after they were moved to their new home an unfamiliar growth appeared among them, and soon the unmistakable but always curious and interesting Jack-in-the-Pulpit presented himself to add dignity to the scene, and he is to remain during good behavior,

The triangular bed, eight feet long and about the same width, has for two successive years been filled with "Superb" pansies,-yes, superb, with their wonderful size and texture, and their marvellous hues. This bed has been the admiration of many. It is bordered by English daisies, an arrangement often seen in Boston's pride, the Public Gardens.

blue forget-me-nots, fuchsias and tuberous begonias in many varieties, grow luxuriantly and yield a wealth of color rarely excelled.

The ferns have not been disturbed since planting, but the beds are spaded

North Line of House Plant Border FLower Flower Bed Bed in the 2 3. spring and barnyard fertilizer mixed thoroughly with the soil. Broader spaces lie beyond, studded with floral gems I should very reluctantly spare, but no part of

** PEONIES.

me as my shady little corner with its

unfailing grace and beauty. L. E. R.

my garden seems so beautiful to

ONG ago my other half told me that he wanted his flowers big enough and bright enough so that he would not nedd to put on a pair of spectacles to see them. I could think of nothing else that so well filled this description as peonies, so when we laid out the grounds of Oak Lawn groups of this bold-flowered plant were planted here and there for the "gude mon's" special benefit. We bought seventeen varieties in all, and think we have learned some things about them that may prove helpful to others.

First, they are man-catchers. Our good brethren delight in their big, bold outlines and rich, warm colors. I believe in remembering the men,-they are half the world, you know. Plant liberally enough of the peonies so that you can afford to share with your friends. Have a white, a pink and a deep red one if you have not room for more. Your husband's friends, the doctor and lawyer, the minister and taken kindly to their new environments. the editor, will appreciate one of these I wonder at it, even now, though three grand posies, especially if arranged with

years have but increased their loveliness. a bit of the old-fashioned ribbon-grass that nature seems to have intended to go with the snowball and peony. Then give that big, awkward neighbor boy one now and then, or that rough-jacketed workman; it will do them good, and you

The second thing I have learned about them is that if one wishes variety without duplication, he ought to purchase his peonies all of one dealer. There is more fraud to the square inch in the nomenclature of peonies than of any other plant I know of. We bought, as we supposed, seventeen different sorts; we purchased of various flower-growers, just as name and description struck our fancy. We In the longer bed, with its edging of had out, of that number, four deep reds exactly alike, and two creamy white ones, all, mind you, purchased under different names. It would seem as though every florist did his own naming.

The third point, (though it applies only to hot, dry climates,) is to avoid spring planting. They need time to make a good bottom growth before hot, enervating weather comes on. My fall planted peonies generally bloom the first spring: spring planted ones the second and third season after planting. I believe this is

Last of all, in an uncertain climate stick to the good old herbaceous sorts, and let the tree peonies alone. We have had two of the latter for eleven years; "ten of these years the plants have set early flower buds, but the first blossom has yet to mature,-too early for our uncertain springs. We can't stand over them with a blanket every night, and Jack Frost catches them every time. If we had our planting to do over again, we would put the tree peonies on the coldest and most northerly knoll on the premises, so as tokeep the buds from swelling too fast in mild winter weather.

Some people say to starve peonies. Our finest specimens are in the full sun, with half shade a small portion of the day, and the beds are mellow and deep; besides, we give a dressing of rotted manure each year, and have from the first. We have always found that luxuriant foliage precedes abundant flowers, hence no starving for us."

LORA S. LAMANCE.

EVERGREENS.-Last winter, savs Gardening, proved that in some instances a temperature of 25° below zero, prolonged for a few days, is fatal to Nordman's fir and the Japanese Sciadopitys verticillata. Both were protected, the former by a solid board fence as high as the tree, and the latter by a slatted crate, shading it, but allowing free circulation of air. The fir had all the terminal and lateral buds killed on all but the lower tier of branches, which were covered with snow, while the Sciadopitys had all its buds destroyed. Both are injured beyond recovery.

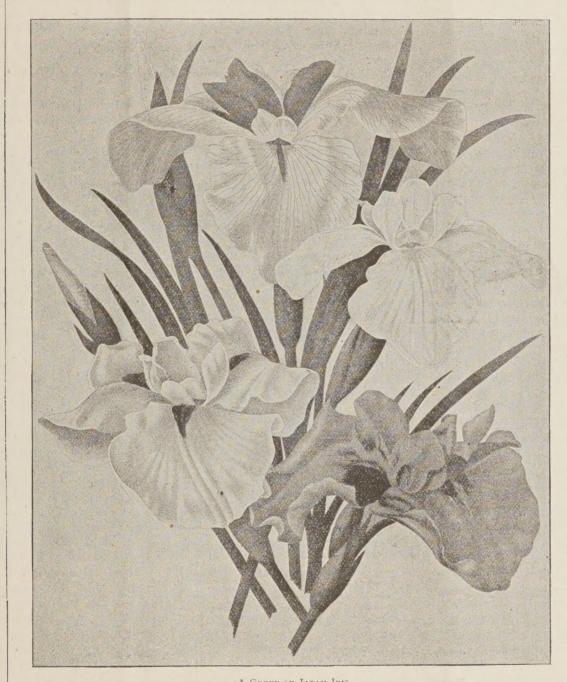
THE JAPAN IRIS.

specimen of Japan iris; yet a great many people fail with them simply because they

F all our hardy plants none is so early in the spring and given the same by frost many of the leaves were upwards grand and beautiful as a well-grown care I gave the German iris. They grew of four feet long,—and such flowers as finely and produced some magnificent they produced the following June! Orblooms in June. The latter part of the chids could not surpass them. to not furnish the plant with its most season was extremely dry, but I supimportant requirement - water. As is posed that the plants were all right, as can well afford to give the plants a little well known almost all irises are swamp drouths never seemed to injure the com- extra care, and a bed can be prepared at plants, and are therefore great lovers of mon sorts. But the next spring, when small cost which will furnish just the water, yet most of the species will adapt they started to grow, it was noticed that requirements for producing the grandest

were strong clumps, and were set out color and began to grow vigorously, and

This is such a grand flower that one



A GROUP OF JAPAN IRIS.

ing with almost equal vigor in water or on dry land,—as for instance the varieties of German iris, which flourish like weeds in our gardens. But my experience has shown that the Kæmpferi iris requires an abundance of water during the growing season. My first attempt at the cultivation of this plant was with a collection of upwards of two dozen fine varieties; the plants when received from the nursery the foliage soon assumed a dark green inches to two feet apart. During the

themselves to almost any condition, grow- the foliage of nearly all of them was of a flowers. Select a level spot of ground sickly yellow color and the growth very convenient to some water-pipe or well, weak, a large portion of them dying in a mark out the size and shape you want few weeks, and those that survived made the bed, then remove the top soil to the a very poor growth and produced only a depth of fifteen inches, leaving the botfew inferior flowers. I at once concluded tom smooth and level. On this spread a that what the irises needed was water thin coat of cement and enclose the sides and plenty of it, so I removed them to a with boards, then fill up the beds with swampy piece of land which could be rich compost to within two inches of the flooded. The results were surprising; top of the bed. Set the plants eighteen

soil should be kept very wet until the plants are through blooming. Such flowers as are produced by this method of culture is beyond the power of pen to describe. After the plants are through blooming the bed will not require to be kept so wet, but the plants must never be allowed to suffer for water if good results sort and includes a number of beautiful are desired for the next year.

After frost has killed the leaves it is a good plan to mulch the beds with straw or some coarse litter, for protection during winter. If one cannot afford a bed as described, the next best thing is to mulch the plants heavily and water freely during MARTIN BENSON. the season.

FLORICULTURAL NOTES.

N floriculture, experience is teaching us many new things. As to lily culture more satisfactory results are obtained by deep planting; we find them less liable to disease and to dving out prematurely. Deep culture for sweet peas has heretofore been the orthodox practice, but we have lately come to the conclusion that sweet peas blossom earlier and do better planted one-half or onethird the depth formerly recommended. And so we reverse the order of former practice and plant the lilies six inches deep and the sweet peas two or three inches.

The most satisfactory fertilizer for all kinds of flowers that I have used is thoroughly decomposed stable manure. But chemical fertilizers may be used two or three years in succession, in the culture of annuals, with good results. The best plan of fertilizing the flower bed I have tried, is to spade in a fair amount of manure, then sprinkle on the surface a good, plain superphosphate till the soil shows well dusted with it, rake and level the surface and sow the seeds.

The mechanical effect on old gardens of stable or cow manure and the humus it affords, are essentials that cannot well be supplied otherwise.

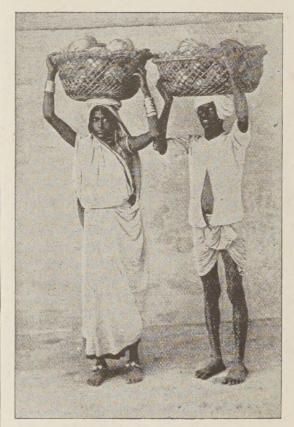
In the cultivation of foliage plants, onehalf the amount of chemical fertilizer replaced by one-third the amount of nitrate of soda well incorporated with the soil, gives good results.

The iris in variety can be made to give beautiful effects in their season. If one has but little room to devote to such rampant growing plants, one of a sort planted so as to contrast colors, yet give pleasing effects of colors in proximity to each other. Give each plant eight or ten inches of space all around it. This will seem like a waste of space, perhaps, at first, but with good culture four years will require a division of most of the roots.

growing season the beds should be kept Irises are easily grown and the variety of constantly moist, and just before the buds forms and coloring are charming. They appear the bed should be flooded and the richly repay the little care and expense required to produce a profusion of these beautiful flowers. There is a large number of varieties, ranging from the purest white to deepest blue and purple. A dozen or fifteen varieties, however, will embrace the cream of the list.

The German iris is an old and favorite varieties. The new Japanese sorts produce larger flowers, but are less hardy; they exhibit a wonderful variety of colors and shades, and flower later than the and February flowers of almost every

Among the desirable house plants the thunbergia stands in the front row. As a plant for basket, box or tub, or for beds,



MELON DEALERS OF CALCUTTA.

trained as climbers or allowed to trail over the ground, they are surpassed by few plants of this character. The plants are somewhat difficult to start from seed, requiring hotbed or greenhouse treatment to attain best results. There are several varieties of thunbergias, all of which are pretty, and by propagating from mixed seeds the effect is very fine. Thunbergia Bakeri is a clear white; T. alata unicolor, a pure yellow; T. aurantiaca, bright yellow; T. lancifolia, a pretty

But the writer has learned that a house plant which will succeed with one, may not with another. The local conditions and the care given, and the experience and knowledge of the grower have all to be taken into account. L. F. ABBOTT.

SOME HORTICULTURAL FEAT-URES OF CALCUTTA.

HILE the accident of geographical position locates us who reside in the colder belt of the United States, among leafless trees, frozen fields and cheerless landscapes for five months of the year, we should not forget that in other portions of the earth there is a ceaseless display of green leaves, beautiful flowers and charming landscape.

India, where frost is almost unknown, has green leaves always on display, and during the months of December, January description grow and bloom in the greatest profusion. The writer lived in India many years, and during all his residence there he does not remember a time when

> flowers were lacking at his dinnertable. The condition of the climate is such that flowers grow to perfection with very little care. Attached to the residence of nearly every European in India is a garden which furnishes some variety of flowers every day in the year.

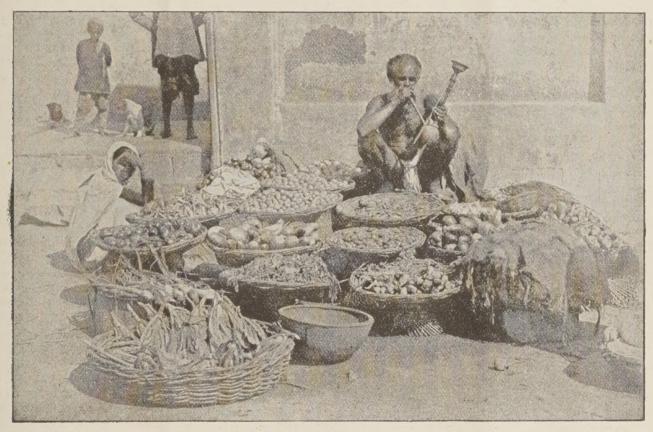
When the culture of shrubs and plants is under the care of one trained in horticulture, no limit can be placed on the perfection to be attained under the favorable conditions of the Indian climate. The government quite rightly encourages the highest form of plant and shrub culture in the various parks and public gardens of the great cities of the Empire. Practical gardeners from England are brought to India by the government, and are allowed a sufficient number of native assistants to keep the parks and gardens in perfect order. It is one of the great sights of Calcutta to visit the two public gardens. One contains a fernery in which there is a remarkable display of the choicest specimens of fern life. In another retreat is found a collection of orchids that interest intensely the lovers of that form of plant life, while along every walk, and lining every driveway

there are rare flowers and broad-leaved palms and a large variety of trees and shrubs that reach their perfection under the genial influences of a tropical climate. The lawn in the Calcutta park is excellently preserved; the soft velvety spread of rich green is very attractive and lends an indescribable charm to the scene. One matter always attracted my attention whenever the parks were visited: The great size of the trees. It was not so much their height but their widespreading branches that seemed impressive. You have all heard of the great banyan tree, Ficus Indica, of Calcutta. It stands in the public garden on the banks of the river Hoogly. This tree is supposed to be the largest of the kind in the world. The wide-spreading branches the branches and reaching the earth, where they take root and act as supports to the branch, thus aiding it to shoot farther out from the main trunk. The tree thus becomes firmly rooted to the earth and is able to withstand the terrific wind storms that would otherwise tear it from the ground or completely wreck it. This grand old tree has attained to the dignity of one of the wonders of the vegetable world. When I visited this park and approached the tree I could but acknowl-

of the trees of this class are supported by provided in great quantities, and are sold to see all sorts of faces,—darling, dimfeelers dropping from the under side of very cheap. An 'illustration shows a dealer in vegetables who has his stores displayed in the market-place. He is clad in the garments of the tropics, and his modest but faithful wife sits by, ready to assist her master and lord, while he takes his ease smoking.

Some melon venders are also represented. The muskmelon grows to great perfection on the sandy river beds, during the dry season, when the river is low. Oranges, bananas, custard-apples, guavas, pomegranates, leeches, pepeetas, limes, edge a feeling of awe and wonder. There lemons, dates, figs, cocoanuts and manstood the venerable old tree that had goes grow to great perfection. All these you almost shudder; while perhaps the defied the elements for many long centu- fruits, with the exception of the grafted next you see will look so full of fun ries. Could it but speak what a tale it mangoes, are very cheap. I have bought and good nature that you almost expect would have of passing years, the rise and two dozen bananas for two cents, and feet, legs, hands and arms to materialize,

pled, pale-faced babies; fat cheeked, rollicking, roguish boys; dainty, demure maidens; dear old grandmothers, with wrinkled faces and ruffled caps; rakish, piratical looking chaps, one can easily imagine to be gypsies or bandits. And, oh, the difference in their manners! Some seem to be holding up dainty, dimpled faces to be kissed, almost asking to be taken and caressed; others, with averted faces, seem to scorn you and repel every advance you make; others, with faces partly hidden and heads on one side, leer at you in a way to make fall of nations, of trees and plants and oranges are rarely more than four cents a and see them dance and turn handsprings.



VEGETABLE DEALER, PUBLIC MARKET, CALCUTTA.

flowers that have risen, come to perfec- dozen. The mangoe season is short, There is lots of pleasure in store for those tion and wasted away at its very base. lasting only about two months. The fruit However all that may be, there was the is considered by many to be the most tree with its spreading branches and delicious known to man. The mangoe is dense foliage. The supports of these branches appeared like colonnades. The grass underneath was worn off by the tread of many feet. The native gardener difficult to describe, but by imagining, if who was with us said it frequently hap- possible, a mixture of equal parts of a pened that three large picnic parties perfectly ripe Bartlett pear, Crawford would spread their lunches under the tree, at the same time, without in the least interfering with each other.

The natives of India are vegetarians. They have for centuries cultivated vegetables, yet it is only recently that, under English supervision, the cultivation of vegetables has been brought to a high beets, onions, cabbage, lettuce, and many

about the size of a Bartlett pear. It has a smooth, tough, green or yellow skin. It is eaten best with a spoon. Its taste is peach and a King apple reduced to a firm, juicy pulp, one might gain some fruit.

PANSIES.

who have never owned and studied a pansy bed; and even more for those who know just how much joy is in such a possession.

If you have a hotbed, sow pansy seed there in August. Transplant until they are five or six inches apart. Protect with mats on outside and paper on inside during cold weather; or, instead of paper, give a light covering of leaves, which, to be an ideal covering, should not be faint conception of this really superb packed closely. Give air and light on warm, sunny days. Very early in spring the protection may be removed, and if carefully watered and sheltered from the O other blossom, if I may except the noontide sun, the pansies will soon be sweet pea, has so captivated the blooming. As soon as the frost is out of condition. The result is that beans, peas, fancy of flower-lovers. There is some- the ground they may be transplanted to thing fascinating in a bed of pansies. It the garden. Make the bed rich with old, other specimens of vegetable growth are does not require a very vivid imagination fine, stable manure (preferably from the

I say, with all deference to writers who say pansies need a shady position. Mulch the pansy bed with chip dirt, chopped hay, lawn clippings, fine manure from the bottom of the heap,-or better than anything else, if you can get it, is wood's earth or leafmold. A good mulch and plenty of water, and we have no sunshine that will hurt the pansies. They bloom earlier in spring and remain in bloom later in fall in a sunny situation, but possibly a sheltered bed would give more and larger blooms in mid-summer.

Sow pansy seed every August or September in order to always have young plants. If you have no coldframe or old hotbed for them, perhaps May or June would be a better time to plant. Grow the plants in some out-of-the-way nook and transplant to the garden in August. Have the soil very rich and when the plants are blooming give weekly doses of liquid manure.

Keep all faded blossoms picked off; do not allow a seed to form if you can prevent it. If you should have an especially fine plant from which you are anxious to save seed, after deciding how many pods you will let ripen, keep all buds picked off until the seed is ripe enough to gather, after which it will not matter how much it blooms. To grow good seed the strength of the plant should be directed to seed growing only; it should not be allowed to form seeds when fine blossoms are demanded of it.

Do not set the plants too close,-have at least six inches of "elbow room": more would be better. If crowded they grow spindling and weak.

Pansies should be grown in a welldrained situation, for it water stands on them or ice forms on the bed, they will "winter kill." For winter protection mix leafmold with old, fine horse manure, in about equal parts. A layer two inches deep should cover the pansy bed; this should be worked down under the plants that it need not injure the foliage; over the plants a covering of leaves lightly thrown on and held in place by evergreen boughs, just enough to keep the leaves from blowing away, but not enough to make them pack solidly. Uncover early in spring, for they are hardy little fellows and resent too much coddling.

E. D. B.

SHRUB NOTES.

A NYONE planting a lawn or shrubs should first of all should first of all consider how to have it an all-round-the-year lawn. Most shrubberies are pretty only in the spring, but it is possible to have the shrubbery showy, bright and cheering, even in winter. The best winter shrubs are the barberries, including the English sort, which has become naturalized in many of our States, the high bush cranberry and the red-barked dogwood. This last has

cow stable). Give them a sunny situation fire-red bark all winter, and when it is ten years old will cover a space twenty feet in diameter in moist soil. It is grand for winter. The High Bush cranberry is always beautiful, flowering in May, and in July and August is covered with yellowish red berries, which turn deep crimson in October, and remain on the bush till spring. But for all bushes for winter give me a large barberry. The berries do not lose their brillancy with any amount of freezing. For early winter by all means add the American Euonymous. All the above shrubs can be found in our woodland edges.

> For a family that has no greenhouse or conservatory, the most satisfaction in winter can be obtained from forcing some of the ordinary garden shrubs. The best is the common lilac. Take small bushes of three to five in height, in November, and plant in boxes. Set in the cellar and lightly water. When a plant is wanted bring it upstairs where it can have plenty of light and water. It will require about three weeks to get flowers. Other excellent shrubs for forcing are the yellow flowering currant, Ribes, the old fashioned syringa or mock-orange, Spirea prunifolia, Deutzia gracilis and the Persian lilac. The last needs more care. The very best lily for forcing is the "lemon lily" Hemerocallis flava. I have had over eighty flowers from a single box. It needs only moderate light and plenty of water. The fragrance from such plants fills the house. E. P. P.

AZALEAS.

THE azalea has always been considered strictly a hothouse plant, but people are now beginning to see it in its true light, and find out that the plant is perfectly adapted to window culture. It can be grown successfully with little trouble, and there are few rules to follow in its culture. The plants are natives of the hilly parts of India and China, which fact gives us an idea of the proper soil and conditions; the name being derived from a Greek word meaning "parched." which doubtless refers to the kind of soil in which they grow naturally. The soil should contain considerable sand to insure perfect drainage, and as the roots are very fine and fibrous the soil must be carefully prepared, - a mixture of leaf mold and sandy loam, very carefully sifted, being a perfect soil for its needs.

The azaleas are very free from disease and insect foes when properly cared for; thrips and red spider sometimes attack the plants, but only when spraying has been neglected. The plants require a strong light and frequent spraying,-fine specimens cannot be had without these two requisites. A temperature of 60° during the day and 45° to 50° at night will be found suitable for them, and for this reason many people can raise them who cannot grow more tender plants.

Some of the Chinese varieties begin to blossom in September, others at different times during the winter and spring, while some sorts give a profusion of flowers during spring until May or June. After the plants are budded they can be kept from blooming at the proper season by placing them in a cool situation where they are free from frost, until a few weeks before the flowers are wanted; then bring them into the heat gradually and they will develope the flower buds rapidly. Florists take advantage of this fact to have them in fine condition for special occasions. The treatment of plants after the blooming season is over, is this:

Carefully remove all the faded flowers and seed pods and plunge the pots in a shaded place in the garden, or bank up around them with coal ashes. In either case cover the earth with a thick mulch of dead leaves or strawy manure.

Water the plants at least three times a week during summer, and oftener if the season is very dry. This treatment causes the plants to mature the new wood properly, and set a good crop of buds for the coming winter's blooming. On the approach of cool nights the plants must be removed to a cool room or pit, where they can be kept until freezing weather. The plants can be repotted at this time, if needed, or in spring after the blooming season is over.

When allowed to grow naturally the azaleas are ill-shaped plants, and require considerable pinching and pruning to make them of satisfactory form. Usually the young plants are allowed to grow as they please the first year,—but just before rapid growth begins, the second season, the new shoots should be pruned and trained to form a well shaped head; but after this time do not attempt to check the growth or shape the plants.

Florists sometimes tie the branches down before the wood becomes too hard, and then the new growth, as it turns upwards, forms an umbrella-shaped top that is beautiful, even if not natural looking.

These plants can be sent to any part of the country when full of buds, and if properly treated on arrival at their destination, will go on and blossom as if they had not been disturbed. I saw two plants a short time ago in full bloom that had been sent a thousand miles by express only a few weeks before, in midwinter. Few plants can stand that treatment and mature such a quantity of buds.

There are hundreds of sorts of azaleas, ranging in color from white to dark red. almost purple, through all the shades of pink, salmon and red, the flowers being both single and double. Among so many fine sorts it is hard to choose, but one thing to me is of more importance than the color and size of the flower, and that is its keeping qualities,-many varieties remaining perfect on the plants much longer than others. 7.

THE CULTURE OF FERNS.

TE all love ferns, but many of us do not try to grow them because we imagine that they require special treatment and special soil. The truth is that ferns are very easy to grow either in the garden or greenhouse Nearly all writers upon fern culture insist on the use of peat, and this we are not often able to procure. This was a great discourager to my efforts until I found that florists who grow ferns for market, use the same sort of soil for ferns that they do for roses, carnations and geraniums: Good, fibrous soil, light rather than heavy, and fresh, fibrous loam and well-rotted cow

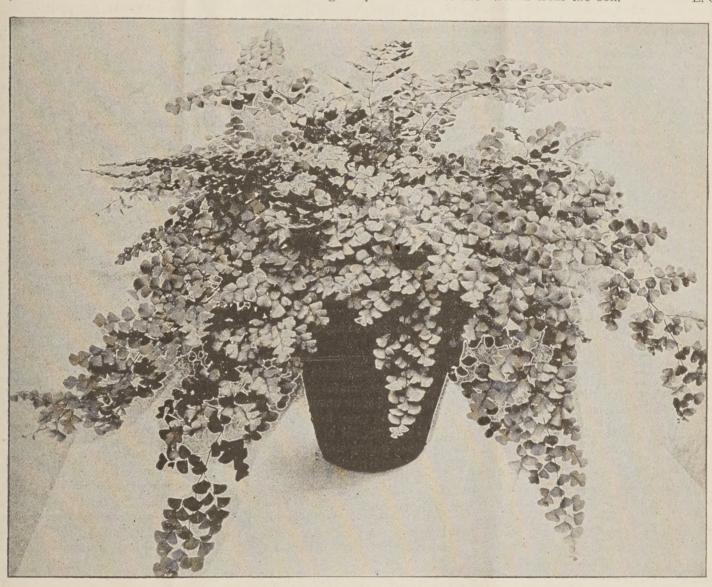
The sword fern, Nephrolepis exalta, is very handsome when well grown, and one of the most useful for all purposes. A beginner would do well to choose this, together with Pteris Victoriæ and species of the first mentioned genera, for early experiments in culture. Davallia Mooreana and D. tenuifolia are also easily managed.

It is better to begin with young plants. Be careful not to over-pet them; wash the inside of the pots clean, and give especially good drainage; use open, rich, instead of filling the pot with soil to the

There is no need to keep ferns in the house all summer, though many people do it. They thrive better outside on the piazza or other sheltered spot, provided the owner will not forget to water them.

An old fern that has filled the pot full of roots may be repotted at any time except in fall. Repotting at this season would interfere with the partial rest which most ferns like to take at this season. With plentiful watering one can grow quite large specimen ferns in won-derfully small pots. Two points that the fern-grower must never forget, in potting and repotting, are to have the drainage particularly free, and to take all earthworms from the soil.

L. G.



ADIANTUM MONOCHLAMYS.

manure. I found, too, from experience and inquiry, that all ordinary ferus, - not including the hardy ones,-would grow in a temperature of 50° to 60° in winter, and this is usually the temperature of our rooms when they are not over-heated. Some of the very prettiest ferns seem to thrive well in almost any temperature that does not fall to the freezing point. Among these are the common maidenhair, A. cuneatum, A. pedatum and A. gracillimum, the thick-leaved cyrtomium, hard-leaved pterises, and the onychiums. Adiantum Farleyensis, the beautiful queen of ferns, must be kept a little warmer,the temperature rarely falling below 60°

brim leave plenty of room to hold water. Ferns should never get quite dry at the root, yet it will not do to keep them soaking wet. Many of them, especially the maiden-hair and gold and silver ferns dislike being splashed overhead, and hot sunshine must never fall directly upon these delicate kinds. Ferns are sure to be killed by little dribblings of water given every day. The same rule that applies to watering other plants is good with ferns: When the top of the soil looks dry fill the pot with water to the brim, so that all the ball of soil may have a thorough soaking. It is not best to set ferns in a draught of either warm or cold air. rooms or his flowers.

JAPAN FARMING.

Japan is one vast garden, and as you look over the fields you can imagine they are covered with toy farms where the children are playing with the laws of nature and raising samples of different kinds of vegetables and grains. Everything is on a diminutive scale, and the work is as fine and accurate as that applied to a Cloisonne vase. What would an Illinois or Iowa farmer think of planting his corn, wheat, oats and barley in bunches, and then, when it is three or four inches high, transplanting every spear of it in rows about as far apart as you can stretch your fingers. A Japanese farmer weeds his wheat fields just as a Connecticut farmer weeds his onion bed, and cultivates his potatoes and barley with as much care as a Long Island farmer bestows upon his asparagus or mush-



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The Rathbun Blackberry.

A visit to the fruit farm of Mr. Alvin Rathbun was made June 24th. His fruiting plantation of the Rathbun blackberry appeared in excellent condition. The plants passed through the winter without any injury whatever and were in full health and vigor, and having nearly completed the blooming season were set with a large crop of fruit. We hope the hot and dry weather of the past month may not greatly reduce the size of the individual berries and his total crop

*** Geraniums raised from Leaves.

The communication from our correspondent, Lillie Sheldon, describing the propagation of geraniums from the leaves is an account of a method entirely new, and is quite interesting, though it is doubtful that it will be of any practical value to propagators. The writer has rooted grape-vine leaves in the same manner, but has never been able to get one of them to make a shoot or upward ward growth, consequently the leaf and root would soon perish together. In the case of the geranium the plant progresses to completion.

House Plants and How to Succeed With Them.

This is the title of a manual of 220 pps. issued by the A. T. DeLaMare Printing and Publishing Company, of New York. Price \$1.00.

The book purports to be an account of the writer's personal experience with plants, and therefore helpful to amateur plant growers, as showing what has been done can be done. We wish we could recommend it to our readers, but truth forbids. With occasional protestations of amateur modesty, there is, also, an air of considerable pretension. A Latin quotation from Virgil appears as a motto on the title page, but nobody need be frightened by it, for it is only one of the many attempts to impress upon the reader the help he is to get from one who has suffered and learned by experience. Both botanical statements and the English language are occasionally considerably strained in the progress of the book. The illustrations are sufficiently numerous, but most of them are old acquaintances to horticultural readers that have done their full share of duty.

As for any helpful information there is very little of it in the book, but the statements and directions on the whole are harmless, and so not positively bad. If there is anything in particular the learner would like to know about a plant or its culture, he will be almost certain not to find it between the covers of this book. One feels that the subject is inadequately and ineffectively handled. The inability of the writer one can overlook, but not the fact that the public should be offered this volume.

Surely, "To the making of books there is no end"!

Perhaps a mischievous feature is the mention of a considerable number of plants, with instructions for them as house plants, which are quite unsuitable for the purpose. Among these is the nepenthes, and a very startling bit of information is given in the following statement:

Many handsome Nepentheses are to be found in quantities in the swampy lands of New Jersey, and on the surface of certain lakes or ponds overgrown with moss in Central New York, notably on a small one in Otsego county, called Lake Misery.

Now, botanists should look to their laurels. What have they been tramping about for, all these years, and not found the nepenthes, growing right under their noses, one might say! Botanical journals will make a note, and the good people of Otsego County will see to it that the name of that lake is changed from Misery to Happy.

But charity forbids us to pursue the subject further.

The great new Botanical Work.

In our February issue a notice was made of the first volume of the new work The Illustrated Flora of the Northern United States, Canada and the British Possessions. The second volume has been received, and the third and last is promised sometime this fall. It is sent

The author is Lizzie Page Hillhouse, out by Charles Scribner's Sons, of New York, price \$3 per volume, \$9 for the complete set.

> The general features and scope of this great work were mentioned in the notice referred to. The authors are Nathaniel Lord Britton and Hon. Addison Brown, the latter being the originator or projector, while the greater burden of it is borne by the former.

> The issuance of this work marks the commencement of a new era in the systematic botany of this country, for most of the active and working botanists of the United States, at least, will accept the able leadership of the authors of the Illustrated Flora. Without mentioning the many features of the Flora, we only call attention now to the fact that each plant is illustrated with a good engraving showing its distinguishing points. Later, and when the last volume comes to hand and when we shall have become better acquainted with it in full, we hope to present our readers some remarks, both general and particular, in regard to this great work which in future years will be regarded as a monument to the learning. industry and patience of its authors.

Favorite Flowers of Garden and Greenhouse.

**

A notice was made last month of the first volume of this work which is being issued in four volumes, by Frederick Warne & Co., of London and New York, the authors being Edward Step, F.L.S., and William Watson, F.R.H.S., assistant curator of the ,Royal Gardens, London. The work illuminated with 316 chromolithographic plates of flowers. When completed the four volumes will comprise the descriptions and general cultural notes of the principal genera and species of plants cultivated for the beauty of their flowers. Two more volumes have now been issued, and the fourth and last is promised in the autumn.

It appears to be reliable and satisfactory in all respects, and its handsome plates distinguish it from all other publications ok garden plants. Particulars can be learned by addressing Frederick Warne & Co., New York.

New York State Fair.

Hon. Benjamin F. Tracy's election as president of the New York State Agricultural Society, is only one of the many indications that this year's State Fair will be planned and conducted on a plane of dignity and extensive grandeur never before attempted, The dates this year are August 23-28, and for a month past the offices in Syracuse and Albany have been busy places wherein the plans for the coming monster exposition have been conceived, and are now being rapidly perfected. \$100,000 will be expended in improvements on the grounds.



In this department we shall be pleased to answer any questions relating to Flowers, Vegetables and Plants, or to publish the experiences of our readers. EDITOR.

Daffodils.

My daffodils have become so matted together that it is necessary to make a division; when is the best time to do it?

Conway, Mass.

Do it now, or any time this month.

Moving Peonies and Roses.

Please state at what time of year I can remove peonies and roses without injury to either.

Hamilton, Mont. Mrs. C. B. H.

In cool weather, when the ground is not frozen and when the plants are dormant,-October or November, or early in the spring.

Plant to Name.

I send a leaf of a plant that grew among my plants and I would like to know what it is,-a weed or a MRS. J. V. M.

Abbotsford, B. C.

It is apparently a leaf of some species of solanum,—perhaps the horse nettle, Solanum Carolinense; but with the leaf only it cannot be fully identified, and it may be considered as worthless.

An Amaryllis.

I would like to know the name of a lily or amaryllis that has been kept in the family for many year; it has always been called the "Winecup lily," but I think it must be some species of amaryllis, by the long, ribbon-like leaves, thick and glossy. It blooms August or September; the lily-shaped flowers, borne in clusters on long, strong stems, are red,—not crimson or scarlet, but a clear, brilliant red. I only repot it when absolutely necessary, as it blooms bet ter when the pot is full of roots; and sometimes if disturbed it will not bloom much for a year or two, but its glory when it does bloom is worth waiting for. It has always been wintered in a dark, warm cellar and kept dry until spring, when the pot is set out of

Windham, Conn.

The plant is probably Valotta purpurea, often called Amaryllis purpurea.

Sundrops.

I enclose a specimen of which I have been in doubt for some years as to the true name. I have had the plants in my yard for twelve or fifteen years; they first came into my possession as the gift of a lady who called them "evening primroses," but as they close at evening and open before sunrise, remaining open all day, I can hardly call them by that name. The plant grows about one foot high. It delights in shade and cares not much for water.

Pontiac, N. Y.

The plant belongs to the Evening Primrose family, but the name above, which is the common one, is the more expressive, indicating that the flower closes as the sun goes down; it is Œnothera fruticosa, of Gray, and Kneiffia fruticosa of the new work of Britton & Brown.

Insects on Verbenas and Alyssum.

Please tell me what to do to prevent my verbena blossoms being eaten by an insect,-brown wings and long, slender body. Also the sweet alyssum blooms by what looks like a tiny beetle,—black, with brown stripe down each side of body. It seems to jump when disturbed. I think the beetle also feeds on the leaves, but in our soil alyssum grows very fast and the foliage is soon replaced, but not the bloom.

Atlantic, Iowa.

Spray or syringe the plants with kerosene emulsion, the formula for the pre-

paration of which has frequently been published in these pages. Hot water at temperature of 130° will kill the insects and not injure the plants. Use a syringe and draw the water in at 140°, and holding the syringe close to the plant the water can be delivered on them at about the proper heat to be effective.

Azalea.-Sowing Hardy Perennials.

I-Will you kindly advise what is the best treatment for azaleas which bloomed last spring? they be repotted now, or later, or left in the present pots? I have kept mine in partial shade and kept

2-Would it be best to sow seed now of hardy perennials, such as the Iceland poppy, foxglove, campanula, delphinium, etc., or to get plants later in the season?

Peoria, Ill.

I—It would have been proper to repot the azaleas immediately after blooming, in March or April. As it is, they should not now be disturbed. They can be kept outside in a shady place, attention being given to watering them every day, and every morning syringe the foliage to prevent attack of red spider. In September, and before any frosts have come, take the plants inside, and then, removing an inch or more of the surface soil, give a top dressing of fresh, light, fibrous loam.

2—Seeds of hardy perennials can be sowed this month, and if the work is well done the result will be far more satisfactory than by waiting and buying plants later. A new sowing of pansy seed should be made every year, and there is no better time than the present month.

Rose Seed.

Last winter I sent for a packet of Rosa rugosa seed. The catalogue said it would grow readily, but I can hardly believe it. The seed came February I put a few of them in a can of fine earth and set it outdoors to freeze and thaw; another similar tin was planted and put in a warm cellar. In early spring I poured boiling water on some of them and sowed them; the rest I sowed without preparation. It is now June 23th and not one has grown yet. What shall I do next, or what should have been done? Rose seed seems a little difficult. E. S. G.

Rose seeds should be sown as soon as ripe, or be stratified,-mixed with soil at once, and remain so, keeping it moist until time of sowing. Ellwanger in his work, "The Rose," gives the following directions:

The heps should not be gathered until fully ripe, say after the first frost in October; they are then labelled and buried in pots of moist sand. The pots must be covered with glass or something of the kind to keep out mice, which are very fond of the pods. I allow the pods to remain in the sand until the first of January; they are then broken open, the seeds taken out and sown in boxes or pots. The seeds commence coming up three or four weeks after being planted.

Rose seeds kept dry, and sent out in packets by seedsmen, are in poor condition for germinating. The seeds mixed with soil and kept in a low temperature, can be kept until spring and planted out in a bed or border, if one has not the facilities or does not wish to sow them in the house or under glass.

Grubs of the May Beetle.

Grubs of the May Beetle.

I thank you for the directions for poisoning cutworms. I find that the worm which infests my garden this year is not the regular cut-worm, but what is know here as the "muck worm"; the larva of the June bug. It is a fat, white worm, sometimes more than an inch long, with claws at each end; It cuts off the strawberry plants just below the surface of the ground, and in digging up the plant one or more worms will be found from three to six inches below the surface. Can the same methods of poisoning be used with them as with the cut-worms? Will they come up out of the ground toget the poisoned food? If not, is there any remedy for them?

K. P. R. Farmington, Me.

There is no way known of successfully attacking the larva of the May beetle when in the ground, where there is a crop,-such, for instance, as the strawberry. Where one has a piece of ground infested with these grubs, and can turn in some pigs, they will root for them and clear them out. Of course this cannot be done on a strawberry patch or field. Where there is trouble with this grub strawberries ought not to remain on the ground longer than the second season. A new plantation should be made every year, and fall plowing or digging will favor the destruction of numbers of the grubs, and others will be destroyed at the spring plowing. Plowing the ground will throw most of the grubs to the surface, and it will be found that robins and other birds, especially the crow, will follow and devour them. Poisoned bran or meal laid about on the surface of the ground would be of little or no use in destroying this pest.

Plant named .- Unsatisfactory Roses.

1-Can you give me the name of the plant from r—Can you give me the name of the plant from which the enclosed leaf and flower were taken? It appeared in my garden early in the spring, and when between two and three fet high, it began to blossom. The most curious thing about the plant is that the flower on the top of the stalk is cup-shaped with the open part of the cup up and fully twice as large as any of the other blossoms. The latter hang down like the foxglove, which they resemble, but I do not think the plant is a foxglove.

2—Is there any remedy for a Jacqueminot rose

2—Is there any remedy for a Jacqueminot rose whose buds do not open? The plant buds freely every year; the calyx opens wide, but the petals remain closed as if bound, till they begin to wilt. Norwich Town. Conn.

1—The specimen received is a foxglove, Digitalis purpurea. The large, terminal, upright flower must be considered as an aberrant form, -one peculiar to this seedling plant.

2-Knowing nothing of the circumstances in connection with the plant mentioned of General Jacqueminot, it is impossible to offer an explanation of its failure. Our correspondent does not say whether this plant has ever properly opened its flowers. If its whole history were known, something more than now might be said of it. However, it may be experimented with. Give it a good dressing of stable manure this fall, and repeat it in the spring, digging it in. After frosts have passed in the spring cut the plant nearly to the ground and thin out its shoots,—at the most let only from three to five shoots grow, according to the strength of the root. It is possible that something in the soil does not suit the plant. If other varieties do well under the same conditions, and this one obstinately refuses to open its buds, it is very certain that it is in uncongenial quarters, and then the best thing may be to dig it out and throw it away.

O impress certain points of much importance in hedge culture, another series of illustrations is here presented, quite unlike those of a former article. The present matter is designed to deal fundamentally with the question of choice of plants for hedges; to indicate why failure in hedge making is liable to occur by using some kinds of plants, while by using others the chance of failure is reduced to a minimum. How can we better go about this matter than by the use of a

MORE TRUTHS ABOUT HEDGES. to give helpful information, at least would have planters who undertake the task to do so with eyes open.

Unfortunately, as intimated in the former article, many planters start in to have a handsome hedge by setting these strong-growing sorts, and then failing in the after-care of proper shearing, a large proportion of such hedges turn out failures, and, in many instances, eyesores. Is it not obvious on the very face, that whoever undertakes such a task undertakes a great battle in restraining nature?

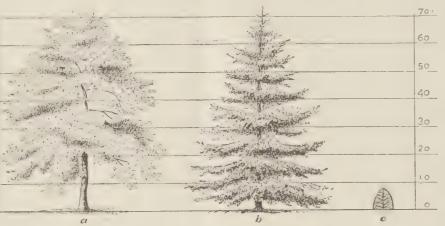


Fig. 1-The Battle against Nature in Hedge-making.

a and b size in feet naturally reached by strong-growing hedge plants; c the seven-foot hedge derived from such.

scale in feet, as applied to the material to be employed and the end sought,—a fine hedge.

The figures scarcely need any explanation. In the upper engraving we find to the right a cross-sectional view of a hedge represented as seven and one-half feet in height. Most persons would prefer a hedge not as tall as this, both because of the obstruction to the view, and the great difficulty in keeping a high hedge properly clipped; yet at this height the hedge is a mere pigmy beside the two trees that appear in the same engraving. The trees are two common ones much planted for hedges,—the honey locust and Norway spruce. It is designed to show them as they develop under favorable circumstances; the honey locust has reached eighty feet in some instances, and the Norway spruce more than 100 feet in height.

Now the point of this engraving lies in the fact that planters starting out to



Fig. 3-Forms of Hedges.

obtain a seven-foot hedge by planting kinds that grow to ten times this height, undertake a great battle against nature. It means that by a course of frequent shearing the growth is to be so restrained and the branches so divided as to virtually make a dwarf plant from that which naturally grows to a great size. That such dwarfing can be effected is not at all denied, but the present writer, in seeking

The plants of these and many other strong growers are sold at low prices, and that makes an inducement to set them. Excellent as a hedge from this material may be made, let us remember that it will be at the price of careful clipping every year. A few failures to properly shear the hedge will jeopardize its future value.

assumes a regular conical form, and with remarkably dense foliage, and is perfectly hardy. It is an offspring of the American Arbor vitæ, which also may be used as a hedge plant, but the growth is considerably stronger that the kind here shown.

The buckthorn, e, as well as the others illustrated, belong to the shrubs, a class of which many are well suited to the hedge row, for the sufficient reason that they naturally branch low down, The growth is strongest where needed,—next to the earth. The buckthorn is a robust shrub rarely exceeding a dozen feet in height, and with a little care it makes a handsome hedge.



Fig. 4-WINDBREAKS IN DOUBLE AND SINGLE ROWS.

The various privets of the catalogues are all suitable for hedges, but we incline to think them rather more liable to the objection of missing occasionally in the row after a time than are the other kinds named.

The Japan quince occupies a very high rank as a hedge plant. Even with old age it rarely exceeds a height of eight feet, which fact shows how small a part the shears are required to play in making a fine hedge from the plant. Moreover it is sufficiently thorny to form a defense, so that when in a hedge it is not more than



Fig. 2—Showing by the same scale as Fig. 1, kinds suitable for Hedges WHICH DO NOT GROW LARGE IN NATURE

d, Siberian Arbor vitæ; e, buckthorn; f, privet; g, Japan quince; h, spiræa; i, deutzia; j, k, hedges.

Our next step is to show that planters may have recourse to other kinds of hedge plants in which the fight against nature is not so great. This is made apparent by figure 2, drawn to the same scale as figure 1, but in which no subject that naturally reaches a twenty-foot line as to height, is shown. Here, by way of comparison, is shown a seven-foot hedge at j. It is at once apparent that if the planters can find in kinds that never exceed fifteen or twenty feet high, such as are well suited for hedges, they have a great advantage as compared with working with kinds that grow fifty or more feet in height. Not only are the kinds illustrated well suited for hedge-making, but others of the same general size might be added to the list.

The Siberian Arbor vitæ, d, is perhaps without an equal as an evergreen hedge plant of medium growth. It naturally

two or three feet high it is an exceedingly difficult thing for man or quadruped to get over it. Add to its other good qualities the facts that it is hardy, that the foliage is bright green and glossy the season through, that the flowers are large, brilliant and produced in great abundance in early spring, and there is present a total of good points that place it at the very head of all plants adapted to ornamental or defensive hedges.

The spiræas, h, and Deutzia gracilis, i, are admirably suited for low hedges or divisions lines when something not above three to five feet high is desired. The berberries, likewise, are capital plants for such purposes, and particularly the exquisite introduction from Japan known as Thunberg's berberry. In the berberries again we find prickles, a feature always desirable in a hedge.

No further emphasis need be laid upon

we have a class that will not run away from us if the shearing should occasionally or even be entirely neglected. This does not mean, however, that the annual shearing is not desirable; it serves to increase density of growth and more pleasing form, things always desirable in a hedge. Shearing moderate growers is, moreover, a trifling task as compared with the same process in the case of strong growers.

A word as to the form of hedges: In figure 3 the outline to the left is the better one because the most natural, and correspondingly because the light and sunshine can reach every part of the exterior better than in either of the others shown. The outline at the right is particularly bad, and yet it is sometimes met. The writer saw such a hedge quite recently, and, sad to relate, the top foliage was badly browned by excessive sunburn, while the perpendicular north side suffered from lack of light.

The foregoing remarks bearing on hedges must not be understood as applying to windbreaks, a matter quite distinct. In setting out windbreaks it is desirable to have strong-growing trees, and here the spruces and pines come in to the best of advantage. In that case shearing, as such, is not resorted to, but only an occasional heading back of the leader and strongest side shoots. Inasmuch as a heavy wall of verdure is sought it is better to give the trees a chance for development through many years, by planting them in double rows rather than to crowd them into a single row. See figure 4.

SPRING AND SUMMER IN MY GARDEN.

AUG. 15th.—The cymes of Hydrangea paniculata grandiflora are whitening and, may be said to bloom, for this curious plant opens its flowers while they are yet very small and green; then they grow larger and whiter, the stems that bear them also whitening. The old flowers a month or more hence will be pink, and if gathered and dried in the shade will retain form and tint for years. I am about to conclude that this plant fears nothing so much as drouth; it may not be exactly aquatic, but I have yet to see the weather too wet for it. A dry spell cuts short its season of bloom and keeps its branches from growing. My one plant is not very large, hardly three feet high, but it has sixty heads of flowers this year. It is perfectly hardy, the foliage strong and good, and it is very desirable. The catalogue pictures of it are lame affairs, so far as I have seen.

The flowers of the Clematis crispa are here, odd and curious rather than beautiful,-not very conspicuous in fact. They are on long stems and droop downward, one flower in a place, some two inches

the fact that in the growths of figure e long; a ribbed vase hung by its bottom, of a dull, purplish blue, is the flower of this clematis. It is said to be fragrant, but I do not think that it has any smell at all. It is a rapid grower; the foliage lasts till late in fall, in fact it cares nothing for white frosts, and it takes quite a hard freeze to kill it, and there are generally young flower buds yet to open when it dies. It kills to the ground and does not start very early. It is a good vine on the whole, growing fifteen feet or more.

> Last year I saved separate colors of Vick's Branching Asters, but the selfsown plants were so much earlier and better that I didn't sow many. In the fall of '94 I made a terrace at the east end of my house, level for six or eight feet from the building, then going down two steps to the old surface, the fine clay previously mentioned making the mass of it. The middle level, crossed by a flagged walk, and covered with two or three inches of manure dirt, was and is now the aster border. Some of the plants were moved when young, others stand where the seed fell. After all were in place I mulched them with manure dirt an inch deep. They were badly pinched by the drouth of May and June, but have grown well lately, and now there is perfect forest four feet high, with a bud opening here and there, all red so far; a mass of bloom before long. Vick's aster is certainly a

> In the spring of '95 I ordered a Eulalia Japonica zebrina, this being the mailing plant's second season of growth. Last year it was four feet tall, with four or five stems; now it is about six feet, with over twenty stalks, though many of them are small. It is still growing fast and it may flower this year. It stands at the upper level of the clay terrace, so near the house that it does not get its normal amount of rain, but it bore a severe drouth last year without suffering apparently. Since reading in the MAGAZINE that it likes water, I have given it soap suds, etc., quite often; whether I have helped it or not I do not know. This is a plant no one should even attempt to do without; the smallest yard and the slimest collection should contain it. It is of larger and coarser growth than one would think from the catalogue picture; the leaves, bearing two white spots every few inches their whole length, are about an inch wide, and the stems are quite stout.

E. S. GILBERT.

ROSES AS WINTER FORCING VARIETIES.

In a communication to the Florists' Exchange H. H. gives opinions on some varieties of roses for forcing, as he has found them in his practice:

AMERICAN BEAUTY.—This most beautiful of all roses is a very rank grower, but at the same time it is very susceptible to black spot and red spider. It is the rose for the upper ten, mostly

bringing a big price, always in good demand, and very profitable when well done.

Meteor is without a doubt the finest dark red we have-very free blooming, easy grower, brings good prices, and sells on sight. the best results from this rose it should have a house to itself, on account of the high temperature it needs to get good, bright color into the flowers, instead of black ones with incurved petals; 65° to 68° nights, 72° dull days, and 80° to 85° with sunshine is right. This variety also needs watching closely for cutting the

Bridesmaid is considered the best pink, better than the once popular Mermet. It is profitable.

Madame Hoste produces more flowers than any other variety, is a good keeper and sells well.

Papa Gontier he would not be without. It needs a cooler temperature than most others, 50° at night being about right. Requires liberal watering.

In whites Bride cannot be beaten for fine use, and Niphetos for everything that comes along.

Mrs. Pierpoint Morgan is thought to be the "finest rose of recent introduction."

Perle and Sunset are two good ones in the yellow class.

Kaiserin is spoken well of as a summer rose, but "has a little drawback in the winter, however, on account of its flowers coming in with a weak neck; also being a little shy in spring; its substance and lustre are entirely lost at this season."

Watteville is grown less and less every

Belle Siebrecht has something charming about it; its brilliant color and lovely formed bud being very attractive, but it lacks strength and length of stem and is also very susceptible to black spot.

La France and Duchess of Albany are good ones for summer, but less desirable for winter blooming.

American Belle never grew half as strong as Beauty with me, and the last named always

Mrs. Whitney is too slow a grower to be profitable. Souvenir de Wooten is an easy grower, but poor keeper.

Madame Caroline Testout has a most beautiful color, but the blooms are too single and the plant is not productive enough. quickly fades after the flowers are cut.

Senator McNaughton, the White Perle, has a weak constitution, and is not desirable

Cusin and Mermet are superseded by Morgan and Bridesmaid.

THE WHITE PINE.—This tree is recommended for waste lands by The Forester. There is no tree of more commercial value, and "it is not as particular about its habitat as is ordinarily supposed." It grows fairly well on sandy land and luxuriantly in wet swamps In southern New Jersey. Facts testify to the lasting qualities of white pine as a building material. The young trees should be planted on waste lands, and encouraged where they spring up naturally.

SEED PODS.

The dwarf, early flowering cosmos is already in bloom. Some little plants, not more than eight inches high, showed their first open flowers June 3d.

August is the time to re-pot freesias. We shake the bulbs free from the old, dry soil, plant them in fresh, rich loam, and encourage growth by watering.

Our surest way of killing moles and mice is to make "bread pills," rolling half a grain of strychnine inside each one, and drop them into the mole-runs all over the garden.

From a small cutting of Crimson Rambler planted early last season, we have this year half a dozen or more shoots from four to six feet high. The bush began blooming early in May, and is still (June 8th) a slendid mass of deep crimson blossoms.

Our last plantings of cannas and gladioli are now in their full flush of beauty. Italia and Austria are handsome, but Burbank seems to thrive best in our soil and climate, while its great splendidly marked and colored flowers receive much warm praise. Of all the gladioli my favorites still are deep, dark Africaine, with its amaryllis-like flowers, and Snow White; the latter is not ivory or cream-tinted, but its blossoms have the purity of virgin Snow:

Some of the villas and cottages around our city of Asheville are quite unique and picturesque. One of the most original of these is built of rough logs with the bark left on. The ends of the logs and the stones which fill in the chinks are painted a light umber. The railings of the porches, as well as all ornamentation, are of rustic-work. The inside finish and furnishing of the rooms is elegant. After the glaring paint and pretentions of other houses, to visit this one is a relief.

From past experience with the sweet olive, Olea fragrans, I am inclined to recommend it as a shrub almost hardy in the South Atlantic States. My little bush is now about six years old, and the last four years of its life have been spent in the open air, with only an old barrel turned over it for protection through the very coldest weather. During the warm weeks of our changeable winters it will be found full of its small, delightfully sweet, white flowers and tender leaves. A sudden nip of cold weather leaves it quite disconsolate-looking for a time, but it soon recuperates and tries it again in the pluckiest manner possible. It is planted where it will have shade from trees in summer, and the dwelling as a windbreak in winter.

The chief trouble with sweet peas in our latitude is that they do not last long enough. We have our finest flowers in April, from seed sown in autumn. Before July is over the glory of the hedge has departed and we pull up the vines in order to plant the rows with something cultivation, mean poor returns.

else. Watering and mulching does not seem to extend their season in the least. They live longest planted in rows in the vegetable garden where the soil is mellow, rich, deep and well tilled. But there is quite a difference in the longevity of varieties. Looking down a long row of select varieties (July 7th,) I see Blanche Ferry's space is still bright with pink and white flowers, while Emily Henderson is like a snowdrift; Boreatton and Invincible scarlet are still bright with blooms. The humming-birds are very loth to give up the flowers, but are gradually forsaking them for the bright scarlet-flowered monardas growing close by.

A recent drive through the park of Biltmore, Mr. George W. Vanderbilt's summer home, taught me a new use for Hall's Japan honeysuckle. A great portion of the drive was bordered with it, and hugging the ground closely, with long tendrils thrown out here and there, a very pretty border it made. Even Rosa Wichuraiana, used freely for the same purpose elsewhere, was hardly prettier This honeysuckle grows well in many places where it is impossible to keep a smooth sod. This six-mile Biltmore drive is beautiful at every turn. At the time of our visit the native yellow and Ghent azaleas were in bloom. They have been sprinkled freely all through the grounds with brilliant effect. Irises of all sorts made gay the banks of streams, and on little lagoons here and there floated the placid leaves of water lilies. Primroses, Phlox subulata, P. armeria, and hosts of other, low-growing, starry flowers have been used to border the drive, and seem to have naturalized themselves in happy little colonies. The native growth, where too rough, has been removed, and rarer trees and shrubs, planted in irregular, natural fashion, take its place. Mr. F. L. Olmstead's work here is beyond criticism with the exception that "when in doubt" he seems always to have planted pines of the dwarf Mughus race. One grows a little tired of seeing them studded so thickly everywhere. Eglantine and the old-fashioned Damask roses grow thickly here and there along the drive. Biltmore house is set like a white temple in the midst of a grand amphitheatre of mountains, and just before its gates is the rampe douce, or pleasure walk, a succession of sloping terraces from the top of which can be obtained a grand view of the mountains. The mansion is closed to the public, but it is not difficult to obtain a pass that will admit one to the grounds and conservatories. The latter are under the care of Mr. Robert Boltomley. Wednesdays and Saturdays are the regular days for visitors.

L. GREENLEE.

PLANTS like good care and something to eat. Stingy fertilizing and shiftless

HOW WE GROW LILIES.

An article with this title appeared last autumn in Gardening, by David Fraser. A portion of it is here reproduced:

We grow many hundreds of lilies in great variety, and find that it pays us to be careful in planting and in giving them the best soil obtainable. October and November are the best months in which to plant them (excepting L. candidum, which should be planted in August), although they can be planted any time through the winter, till April if the ground is open and dry. We grow all of our lilies in clumps, say ten to twenty lilies in a clump, and in this way they are seen at their best. We dig out the hole large enough to hold all the bulbs, a foot deep, if the soil is poor we cart it away and fill in with old rotted sods; in the bottom of the hole we put some very old manure and dig it, having the hole about six inches deep when finished, a thin layer of sand is then put in and the bulbs are set on this, each bulb is then covered with sand and the hole filled in. bulbs seems to like this coating of sand as they start away nicely in it; another thing, they are not so liable to decay as the sand keeps any decayed matter that may be in the soil away from the bulbs, and one of the most important points to observe in lily culture, is not to have the bulbs rest on any manure when planting, as it is apt to rot them.

In planting the bulbs they should be put far enough apart so that they will not need lifting in four to six years. They increase very fast. Some of the speciosum lilies here that were planted four years ago, three bulbs to a clump, have thirty to thirty-five strong flowering canes now, and are growing stronger every year. Lilies like plenty of water in their growing season, and this should be seen to. When you see the leaves at the bottom of the cane turning yellow, you may be sure the plants are dry at the roots. We always keep a mulching of old manure on them all summer, this helps to retain the moisture as well as to feed them. The mulching is put on in the fall and left on, we do not take it off in the spring.

Lilies can be planted in a great many places where other plants would not thrive and they take up very little room when once planted; for planting amongst early blooming summer plants nothing is better. If the H. P. roses are planted in an exposed part of the garden, a few lilies would help to keep the spot gay after the roses were past flowering; the same can be said of the rhododendron bed. We have had all of our Japan iris lifted and divided up and when we reset them we planted a lot of auratum and Speciosum Melpomene lilies amongst them, this will keep the garden gay after the irises are past and will do them no harm.

Lilies when received should be planted as soon as possible as they soon shrivel up if exposed to the air too long. Some of the easiest to grow, and showiest in flower are auratum in variety, speciosum in variety, Brownii, candidum, elegans in variety, Hansoni, Martagon, superbum, Wallacei and tigrinum in variety.

* *

LONICERA MORROWII.—The American Florist gives an illustration of this honevsuckle, but without stating its history. It says the plants "rival the lilacs in effectiveness as early bloomers, and are not excelled in beauty when in fruit. flowers are blush white and are very abundant."



One weed will mar a flower bed. A file-sharpened hoe is our delight. Wood ashes are the best celery fertilizer. Young ivy shoots root well now in the

Liquid manure is both food and drink for plants.

There is no better time than now to sow perennials.

This is the month in which to divide and reset the little double daisies.

Remember that not a case is on record where a grape seed has caused appendicitis.

It is sad to see trees denuded of leaves by caterpillars when a little attention to spraying would kill them.

In deciding on varieties of fruit for future planting, lay great stress on healthy foliage. A slightly inferior sort with good foliage is to be preferred to one of better quality, the foliage of which needs treating to keep it on the tree until the season's end .- T. D. Fowler.

The beautiful stripe and aroma of the Gravenstein apple makes it especially attractive on the exhibition table. And whoever is led to plant it from seeing the fruit at the show will have no regrets. It is an apple of first quality, a remarkably vigorous grower, and productive.

Fall flowers are always scarce. To have such in plenty I lift some asters, geraniums, ageratum, and of course chrysanthemums, in August, pot them, pinch out the buds, and care for them properly. By November and December such flower freely .- L. E. S., Cuyahoga Co., Ohio.

Cabbage worms. The Mississippi Experiment Station recommends the application of dry Paris green diluted twenty fold with flour, before the heads of cabbage are formed, and pyrethrum after heading, as the best and most convenient means of killing the worms. As cabbage grows from within, there is no danger in applying Paris green before heading.

Celery blight. According to various Station reports, the following remedies are of value in combatting field blight in celery: Shading the plants by means of lath screens, the lath an inch apart; applying sulphur at the rate of one pound to 600 plants; spraying the plants with a solution consisting of copper carbonate eight ounces, ammonia water (26°) three pints, water forty-five gallons, using the apparatus employed for spraying potatoes.

A noble art. Said the Hon. N. J. Colman, former Secretary of Agriculture, to the nurserymen at their twenty-second Annual Convention last month: "If a man is classed a public benefactor who has made two blades of grass grow where one grew before, what shall be said of the men who have caused millions of trees, millions of flowers, and millions of shrubs to grow where none ever grew before. You are the missionaries in a noble cause."

Ten best strawberries. From the last congratulate the sturdy country boy, for the very published report of the Amherst, Mass., Experiment Station, out of more than 150 varieties of strawberries tested, the following kinds showed the greatest merit: Beverly, Bubach, Brandywine, Enhance, Golden Defiance, Greenville, Haverland, Leader, Lovett, Parker Earle. The ten most promising varieties of those less generally grown were Arrow, Glen Mary, Gandy Belle, Howard's No. 14, Luther, Marston, Pacific, Princess, Rio, Splendid.

There are more edible plants than most people are aware of. For instance, a writer in Garden and Forest says the young shoots of pokeweed, a plant growing commonly along the roadsides of this country and Canada, are not uncommon in the the Philadelphia markets. Cooked like asparagus they are tender and have a flavor that is highly relished by even those who flatter themselves that their palates are not uneducated. In the same article the young shoots of milkweed are mentioned as a substitute for asparagus.

Parks and out-door art. A society to be made up of amateurs, land owners, village improvement advocates, foresters, gardeners and others has been organized, having in view the improving of home grounds, villages and parks. The president is J. B. Castleman, of Louisville, Ky., and the secretary is Warren B. Manning, Boston, Mass., from whom further information may be had. It is national in its scope. The membership fee is \$2 a year. This MAGAZINE is gratified with the objects of the new association and heartily wishes it success.

Cherries in the Senate. Surely the mission of a popular horticultural journal has not been fulfilled when the public, United States senators included, know so little about the common things of horticulture. In a debate on the tariff on plants and trees the other week, at Washington, one prominent senator said he had never heard of Mahaleb or Mazzard cherries before, while another said he had been told that it is a very fine variety of cherry that is imported by the thousand. It took Senator Gear to explain that this is not a regularly cultivated cherry, but the natural stock grown from seed on which improved varieties are budded.

Alleghany vine. Are people averse to planting biennial flowers? We are led to ask this question because of the rarity with which one meets the elegant climbing plant named in the heading. It is also known as the "wood fringe," and botanically as Adlumia cirrhosa. The plant has beantiful pink and white flowers, which are produced with great freedom during three or more months. The delicate beauty of the foliage harmonizes charmingly with the flowers. But there is nothing delicate in the growth of the plant; it often reaches a dozen or more feet in a season. The flowers do not appear the first season, but in the second there comes a reward in the bloom that more than justifies the waiting.

Country life. I read the MAGAZINE with pleasure and profit, for it elevates country life and the things of nature. Whatever or whoever encourages living in the country, by adding to its delights, is a benefactor to the race. The country is the bone and sinew of our national life. In the race of life, whether in the business, political or intellectual world, the country boy or girl wins over the city cousin three times out of four. I pity the "well to do" city lad, lucky though he may think himself, with his easy times and fine surroundings; I training he obtains on the farm is developing that which will tend to make his life prosperous and happy .- George Gardner, Carrol Co.,

Satisfactory roses. When I planted a rose bed on my lawn two years ago, I followed the advice of the MAGAZINE in one respect. which has pleased me by the best of good results. It was to set out freely of such old reliables as Jacqueminot, Anne de Diesbach, Baron Prevost, Marshall P. Wilder, François Michelon, John Hopper, Alfred Colomb, Fisher Holmes, and the like, and then very sparingly of the novelties. So I planted three each of the kinds named, with the exception of Jacqueminot, of which five were set. Of more delicate growers only half a dozen, one of a kind, were set. For two seasons now the bed has shown up grandly, and I can only repeat to others the advice given in this journal: To have roses perfectly satisfactory, plant from three to six of the robust and superior varieties named, to every one of kinds more delicate, or of novelties that have not been tested in your. neighborhood. That, with good culture, is the way to get complete satisfaction with roses .-E. H. L., Erie Co., N. Y.

Dried flowers and leaves. The everlasting flowers, such as acroclinium, helichrysum, globe amaranth, etc., pretty as they are, do not stand alone as material suitable for year-round bouquets. The writer frequently makes use of other kinds with the most pleasing results. For instance, almost a year ago he cut some handsome panicles of ailanthus when the samaræ were prettily suffused with red, and these with some fine, large, accompanying leaves have occupied a place over a large picture in his front room and are handsome today, after nearly twelve months. He likewise uses panicles and foliage of the hardy hydrangea, branches of the variegated-leaved Cornelian cherry, and of the box, which latter retains its green indefinitely and unlike spruce and similar evergreens does not drop its leaves. The plumes of the various eulalias are also elegant for use in the house. All such should be cut to lengths of several feet. To our notion these dried products of the garden impart an air of beauty to the interior of a house that cannot be equalled by purchased articles that cost a great deal of money.

San Jose scale. Professor Alwood, of Virginia, who has given much attention to this destructive scale, says that it came into the Eastern States on nursery stock from California. He urges the passage of laws that will provide for inspectors, with almost absolute power in regard to treating nursery and other premises where the scale exists. Such a law has been passed in Virginia. He does not believe in treating nursery stock for scale, but in burning it. There are some alarming cases where the scale has obtained a footing and been present for years before being detected. He said it existed for three years within a few steps of the door of the Horticultural building of Cornell University without having been detected. It infests all the deciduous fruit trees, such as apple, pear, plum, cherry, peach and quince; and among others the walnut, lindens, catalpas, beeches, etc. The scale is not known to disseminate on the fruit that is shipped, but generally from branch to branch contact. It has also been known, however, to be carried on garments, where the fruit-gatherers had brushed against the scale.

THE USE OF BULBS.

AM surprised that up to the present time those in possession of farms or suburban places have not caught the possible use of bulbs to make their homes delightful. I remember fifty years ago that my father planted rows of old-fashioned hollyhocks about his cornfield; it did not end with mere display, for it put a new element into his children,-we owe today no small amount to those hollyhocks. Still better, one may use tulips, hyacinths and lilies. I should like to have the readers of the MAGAZINE see my tulip display in May, or my lily display in July and August. I never set a strawberry bed without planting tulips in the rows. These make a magnificent show early, and are out of the way before the berries must be sought after. They do no harm whatever, for even the leaves are dried up by the last of June. The number of blooms goes up into the thousands. Seedlings constantly appear, while of course the old bulbs multiply very rapidly. These can be sold or replanted; but it will not be many years before you will have tulip bulbs by the bushel. Lilies, as well as tulips, can be set in vineyard rows. The Candidum will multiply in such places until you can smell it an eighth of a mile. If the cultivator tears out some roots, no matter,you will still have enough left. Besides these, plant more in shady places, where they will bloom a week or ten days later than in sunny localities. The best way to buy tulips is by the hundred; one hundred will give you a fine start.

AN EXCELLENT TEA ROSE.

ROM personal experience I believe Hermosa to be the best pink tea rose for amateur cultivation that has yet been introduced to the public. It is possessed of all the properties that help to make a perfect rose, being of a full round shape, possessing exquisite fragrance, and having the much admired color of LaFrance, only it is brighter and richer. Besides this, it will grow for any one, under all conditions, standing our rather severe winters with nearly as much ease as the hardier Hybrids. I delight in growing this rose; it is one of my special favorites, and I really believe it responds to my care with much more zeal than do any of my other roses. Therefore it is tended with special care. I set it in a slightly elevated bed with a full southern exposure. The soil in this bed is composed of three parts of black, rotted manure to one part each of clay, from a creek near by, and rich loam from surrounding pasture.

I set Hermosa in her bed about May 20th, and in a month she is giving me handfuls of great, fresh roses. When the weather becomes dry and sultry in July and August I am specially careful that she has all the soapy water and liquid manure she can well digest, because during these those from California.

months she is at her best, and must be given stimulants to build up her overtaxed strength. I also give her an occasional teaspoonful of Bowker's fertilizer. As winter approaches Hermosa's wealth of bloom becomes diminished, which indicates that she is about to prepare for a long needed rest; so I build a neat frame around her bed, having one side slightly higher than the others, so that the water may have a chance to run off, and fill this in with leaves and evergreen boughs. I have already given her a mulch of coarse, loose manure. Then I loosely nail a few boards on the top,-loosely so that I may remove them on warm, pleasant days in order that Hermosa may have an opportunity of inhaling a little fresh air and sun-

There is no use in taking up this rose, planting it in pots and putting it in the cellar for winter protection, unless one's bushes are weak, spindling things and then I would advise one to take them up and throw them away, for, in my estimation there is no use in growing imperfect specimens of this rose, unless surrounding conditions are fearfully against one.

Truly, Hermosa is the rose for everybody. If cared for properly it will reward one ten-fold for care and labor spent upon it; and no person can grow a plant successfully unless prompted by natural fondness for the plant and its welfare.

BENJAMIN B. KEECH.

Randolph, N. Y.

PROPAGATING GERANIUMS FROM LEAVES.

AVE the floral friends ever tried growing plants from leaves? I belleve it is a little unusual to start geraniums in this way, but I have a fine, large specimen of which I am exceedingly proud, as the result of an experiment in this line. It was by accident that I discovered that rose geraniums are easily propagated in this way; therefore, I reasoned, why not others?

A leaf with its stem is taken from the plant, but the leaf-stem must not be broken, as it is the point of junction with the parent stalk from which the roots start. These leaf-stems are inserted in a propagating pan of clean, sharp, river sand, and kept constantly moist. I tuck the pan away out of sight under the plant stand on the veranda, and give it no special care, just watering as occasion demands. If all is well, roots will soon form; then the leaf usually dries up, a tiny shoot appears, and you have your plant,-not as quickly as by the usual method of starting from cuttings, to be sure, but interesting, nevertheless, and useful, too, where cuttings are scarce.

LILLIE SHELDON.

LEMONS from Italy and Spain are being sold in the New York market at less thau

THE WELWITSCHIA AT KEW.

THE description of the specimen of Welwitschia at the Kew Gardens, at London, referred to last month, under the title of "The Cone-bearing Trees," page 136, is by Louis Gentil, and published in the French journal, Le Semaine Horticole, in May last. The narrative in the original is a vivid one, and we trust is not much less so in the translation of it as here follows:

On entering into the grand museum by the principal door one is confronted by an enormous glass case sheltering a monster! asked one guide what this strange mass resembled; "A horrible and gigantic toadstool," he answered. In our own opinion it resembled, rather, one of those instruments of barbarous music originally from the lowest scale of the savage world! A carapace like thick, embossed wood and full of indentations, and here and there hang, without order, some unfinished strings,-but that is a plant! Its name? Welwitschia mirabilis!

The Welwitschia was discovered by Dr. Welwitsch, in 1859, in the south-west of Africa, about half way between the equator and the Cape. This plant, one of the most grotesque and inconceivable of the vegetable kingdom, grows in the gravelly deserts where every trace of vegetation has almost completely disappeared. Alone, this phenomenon, in spite of some drops of water which fall every year, develops flowers and propagates itself.

The trunk, if that name can be given to this informal heap, is a circular mass from three and a half to four and a half feet across, rising scarcely above the surface of the soil. This trunk which, it is said, develops during several centuries, gives birth to two leaves which are never replaced, and which persist through the entire life of the plant. They extend to the right and left of the trunk with a length of six to nine feet, and are soon torn by the winds, affecting then the form of a mass of leathery and solid thongs. The inflorescence is composed of numerous cones which appear each year all around the circumference of the trunk. At maturity these cones become of a scarlet

This monstrosity belongs to the family Gnetacæ, near allied botanically to the grand group of Conifers. The plant is undoubtedly remarkable in that it possesses with the simplest structure in relation to its vegetative organs, an inflorescence of which the flowers are more complex than those of any other plant of the group, rendering, consequently, this abnormal excrescence of the desert totally different from every other member of the vegetable kingdom in regard to its mode of growth, the structure of the trunk, the leaves, the flowers and the fruit. This plant has recently, and at different times, been introduced in a living state. Up to this time, however, no success has been had in cultivating it.

The failure is surely very comprehensible,-a child of the sandy lands, far from noise, from the world and active life, discovered, she is in an unspeakable and continual fright, in danger of death from fear, finally when she has been placed in the midst of a world entirely strange to her, a barbarian to all its forms,-delicious and elegant,-which laughs and then lances some compliments more or less bright upon her deformities and her innocence of life, - in

RAISING CUCUMBERS.

NOTICING a short article in the July number on raising cucumbers on ridges, I would like to suggest my idea when raised in the open field. My plan is to mark out rows five feet apart, then take a plow and throw open a wide furrow by plowing up and down; then put in the manure, and I prefer well rotted cow or horse manure,-put in a good, thick layer, then plow around twice, leaving the land in ridges; then roll and work the land very fine, just as fine as I can get it. Then I mark out the rows with a hoe, or still better, the Planet Jr. hand plow, about two or three inches deep. I sow the seed with a Planet Jr. drill, and have the opening sufficiently large to use about three pounds of seed per acre; I like plenty, because the bugs are so destructive. I usually sow tobacco dust along the rows at the rate of 500 pounds per acre; just as soon as as the plants are up, and the bugs begin to work, I put on tobacco dust, the more the better; air slacked lime and a little kerosene is also excellent,-just enough oil to get the odor. The tobacco dust will keep off all insects, and being full of potash is one of the best fertilizers for cucumbers; they need plenty of potash.

I am no admirer of cucumbers in hills. I like my plants to stand about a foot apart in the row; I think it much better, particularly in a dry season. I use this plan any time of the year, but for early crop I prefer to sow in the fall a row of rye every ten feet; this is one of the best protections from the cold and winds that oftentimes are very destructive in the spring. As soon as the rye is ripe, I cut it. I sow two rows two and one-half feet from the side of each intended row of cucumbers; this leaves each row five feet apart. I keep the ground well worked up to the plants with a double-winged shovel plow, or any other. Cucumbers need very rich land, with an abundance M. T. THOMPSON. of potash.

Rio Vista, Va.

BOUGAINVILLEA GLABRA SAN-DERIANA.

When this new bougainvillea was first introduced it was predicted that it would soon become very popular as a pot plant because of its profusion of blooms and long period of blooming. In this there has been no disappointment. Six months old plants grown in pots yield a large quantity of flowers but as the plant is of a most rapid growth, it must be kept well supplied with food, and will give more or less flowers from April until autumn. But its great beauty is revealed when given an open border under glass. Then its great masses of pleasing rosy crimson flowers make a floral sheet that is dazzling, and is not one of a day, but lasts from early spring until mid-winter. We know of no early spring until mid-winter. plant of late introduction that has given so much satisfaction. It has come to stay. the individual flowers last for many days they are valuable for floral decorations both for their eolor, profusion, and duration. It should be as a conservatory plant and given a period of rest from January until March.—P. F. Berckmans in American Florist.

THE FAMILY COZY-CORNER

Cooking Cucumbers.

In a recent number I saw a query about cooking cucumbers. I have had them stewed for the last twenty years and think there is nothing to beat them. I found the Early Chinese the best, as there are so few seeds in them.

MRS. W. A. M.

Brampton, Ont.

Western North Carolina.

We came to North Carolina six months ago, from Iowa, in search of a healthful climate, and surely here among the forests of pine trees, surrounded by lofty mountains, and supplied with the purest water, the best of health should be enjoyed, and probably there is nowhere a more salubrious climate. region is settled by southern people in snmmer time, and by northern people in the winter. Just now (the middle of May) it is wonderful almost beyond description to see the loveliest flowers in bloom on and around the mountains. North Carolina is truly a home of wild flowers, for here the beauty as well as the variety is almost limitless. The small, dwarf flowers that carpet the ground with rich and varied patterns, have been blooming ever since January, the first among them being one which is called "The first Breath of Spring," a white and very fragrant flower; next came the Trailing Arbutus, a beautiful pink flower; violets in all shades of blue, and also white and yellow; the lovely dogwood was a sight, the white flowers making the mountains look covered with snow. Then came the honeysuckles, with their fragrance, and the lovely azaleas in several shades, and the beautiful kalmias,-all these to be appreciated must be seen.

I wish all lovers of flowers could see the mountains

of North Carolina. The calycanthus grows wild and to perfection here, and also many other beautiful flowers that I cannot name. The next coming into bloom will be the rhododendrons, with their emerald-green leaves and immense clusters of beautiful flowers gracing the tips of every bough. I am not here describing a garden, but mile after mile of mountain side is covered with this grand flower; also the dainty mountain laurel, in several shades, beautiful in bud as well as bloom; these cover acre after acre, through the mountains and valleys of

western North Carolina.

Last, but not least, are the fine, luscious berries that grow on these mountains,-now the strawberries then follow the dewberry, blackberry, and the huckleberry. All these grow and mature to perfection, large, luscious and sweet,—such as none but a climate like this can produce. MRS. W. T. R.

Hendersonville, N.C.

Flowers under Difficulties.

When we first came to this country it was occupied wholly by the large ranches. It being eighteen miles from the nearest town and 200 miles from the nearest railroad, very few women had ventured so far from the settlements. Here and there a ranchman, or one of his foremen, had brought his wife with him, there being eight between Fort Elliot and the next town south, a distance of fifty-five miles; and these all exclaimed, as with one voice, "You can't raise fruit or flowers here. They just won't grow." But my bump of credulity never was properly developed, and I always would find out things myself. Being a native of New York I knew nothing of hot, dry climates. This country, the Panhandle, is very sandy. The days are very warm and the nights cool, and sometimes during July and August there will be six weeks without rain.

We had brought flowering roots and shrubs from our old home, many of them purchased of James Vick, Sr., when I was only a child. These were set out with great care, but all died, the victims of change of climate and my ignorance, My neighbors consoled me with the proverbial "I told you so," but my little daughter and I had a good-deal of "stickin our makeup, so we tried again the to-it-iveness next year. My "John" set a post in the ground near the kitchen door and nailed a tomato case to the top. I filled it with the richest dirt I could find, and planted petunias in it. I never saw anything grow as those petunias did; the ran over the sides of the box, and long before frost the box and post were completely hidden by the solid mass of bloom. This gave us a new idea, and the next year we planted everything in boxes, placing those plants that dislike strong sunlight, on the north or east side of some

trees, so that they only got the sun early in the morning and late in the afternoon; the rest of the day they received what sunshine filtered down through the leaves, and they seemed to enjoy it better than solid shade.

That year they did nicely, and when a neighbor's baby died we had some white balsams and achilleas to place in its waxen hand and on the coffin lid; and the next winter when another neighbor's husband died, we had white geraniums and pansies for the

same purpose.

We can raise them in beds by making the beds perfectly level so the water will not run off, as they must be artificially watered. Last New Year's Day I sent a creamy white rose and some white chrysanthemums eighteen miles to adorn a bride, and some pink ones for her bridesmaids. One day, when my flowers were in full bloom, a couple of my neighbors came to make me a visit. Said one:

"Oh, dear! I would give anything on earth if I could raise flowers like that."

"Well," said I, "why don't you try?"

"Ohl My husband says we have no place to keep them, and they are too much trouble."

And mine says I will do very well if I do my work and take care of the kids," answered the other.

Well, here are some petunias, balsams and asters that are too thick, so I will give you some plants; it won't hurt them to be transplanted if you water them well and shade them for a few days. Take good care of them and I think they will convert your

The next time I saw the ladies I asked about the flowers. "Oh!" said one, "my husband has made a shelf between two trees for mine, so the chickens can't get them; and he says I may send to Vick for as many seeds as I wish next year." The other said: "Well, mine still laughs at me,

but he filled the boxes with dirt, and makes the boy carry water for them.

As a people we are still "few and far between," but every home has at least a few flowers, and this is growing to be one of the finest fruit countries in the LORNA DOONE.

Eldridge, Texas.

THE WALLFLOWER. The wall-flower is not as popular in American gardens as it deserves to be, chiefly, we think, because too much is expected of it as a perennial. To succeed well, young plants should be raised from cuttings every year. These do better than those raised from seed. Although growing on the ruined castle walls of the Old World, where one would suppose it would be exposed to high temperature, it is never found to thrive well in full exposures in America Certainly, with us, it prefers partial shade. The peculiar odor is especially agreeable to most people. It is in this connection, as much as for the beauty of the blossoms, that it is appreciated .- Meehans' Monthly.

THE Shah of Persia, who owns so many valuable articles of jewelry and fancy goods, is the possessor of what is doubtless the most expensive pipe in the world, it being worth some \$400,000. The whole of the long stem and bowl is simply encrusted with iewels.

Humor in the Blood

Hood's Sarsaparilla Found to be the Best of Blood Purifiers.

"I had a very bad humor in my blood and began taking Hood's Sarsaparilla, and in a short time I was entirely cured. I believe Hood's Sarsaparilla to be the best of blood purifiers and I do not hesitate to recommend it to all sufferers with impure blood." MRS. HELEN DEWEY, Box 70, Gowanda, New York.

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THE COLUMBIAN RASPBERRY.

UR Columbian raspberries are now fruiting fully for the first time, and and to say that we are pleased with them is stating the case very mildly. Last season the little bushes bore a few scattering berries, enough to show us the quality of the fruit, and last winter demonstrated the hardiness of the bushes; this season shows us the great size of the berries and the productiveness of the plants. I never saw so many berries on the new canes of any berries as we find on these, most of the fruit set on the new growth being later than the other. These raspberries very much resemble Shaffer's Colossal in color, size of fruit and manner of growth, as they do not sucker from the root, but are rooted from the tips of the branches. The quality of the Columbian is far superior to that of the Shaffer, being much sweeter and has smaller seeds, which is a decided advantage. While the Shaffer winter-kills badly with us, the Columbian has shown no disposition to do so, though the mercury often reaches 30° below zero.

Its origin is not positively known, farther than that it is a seedling of Cuthbert, a fine red variety; it is supposed to be crossed with Gregg, a large black sort, or with Shaffer, above alluded to. The result of the cross is a beautiful berry of a purple or plum color, neither so hard and seedy as a black raspberry nor so soft and easily crushed as the red ones.

It is admirably adapted for market purposes, fine for table use and the best known raspberry for canning. bushes grow to immense size, and if given slight support when young will reach the height of from ten to sixteen feet; the canes are correspondingly thick and strong and do not break easily with the wind or in picking the fruit.

Some of the fruit matures very late, the bushes being inclined to bear for several weeks instead of ripening up at once.

At this writing when the regular crop of fruit is at its best, there are many clusters of berries just setting which will furnish a succession for some time.

People who raise berries for market can make no mistake in planting the Columbian largely, as the enormous size of the fruit, its beauty and superior quality will make it a favorite among buyers everywhere. LAURA HASTINGS.

A BIT OF SUMMER.

HAD been sewing, sewing,-trying in vain to get my "spring sewing" done, and was tired; tired of thread and needle; tired of the sewing machine; and heeding nature's warning, I went out on the veranda and settled myself comfortably in the hammock, ignoring entirely the call from the unfinished garments. It seemed so delightful to sit and do nothing but look at the green fields, the trees, the beautiful background of blue sky and the mountains of fleecy clouds.

Presently a little humming-bird came darting about among the bright clusters of the honeysuckle which twines about the posts of the veranda. This honeysuckle is a marvel of bloom, and it was with intense interest that I watched the tiny, graceful creature as it garnered the nectar from the bright coral-red blos-How deftly, how skillfully it thrust its beak into the long, slender corolla. Quick as a flash it had "done" one flower, and directly was intent upon another. No matter at what angle the flower stood, the fairy-like bird was equally expert in extracting the honey stored at the bottom. Darting from whatever direction, it seemed immaterial whether from above or below, the mark was never missed. How they were adapted to each other! The long, slender bill, and the long, narrow tube of the

And how awkward it seemed when a great, buzzing bumblebee came booming along and tried to get a sip at the honeysuckle. He flew hither and yon, buzzing louder and louder, as if he would like to exclaim, "Why all this sweetness if I cannot partake?" The bumblebee seemed quite out of place when begging for honey here, but he boomed and buzzed, alighting first upon one flower, and then another, and another, loth to give up and go hungry when there seemed such a bountiful supply of good things to eat. It never seemed to enter the head of the bumblebee that the honeysuckle blossoms were not clover-heads. And while he was scolding, tramp-like, about the unfairness of the distribution of life's blessings, the humming-bird reveled in the nectar placed so freely at its disposal.

As I watched the bird and the bee, the thought came, "How many of us are clumsy bumble-bees, trying in vain to sit at the table with the humming-bird?" How much effort is wasted, how much force is expended, how much complaining there is generally, which might all be traced to an unfitness, a general lack of adaptability, on the part of the unsuccessful complainer. W. A. K.

Columbus, Ohio.

SPIRÆA ARGUTA.

This lovely shruh, perhaps the most beautiful of all the early flowering Spiræas, is now (May 20) rapidly approaching its best. It is a garden hybrid, one of its parents being S. Thunbergi, the other itself a hybrid; it is therefore a combination of at least three species. Of these S. Thunbergi shows the preponderating influence, the flowers being snowy white and of the same size as those of that species. It blossoms later, however, and makes an admirable succession plant to it A group of young plants in the collection of Spiræas at Kew shows how valuable it will prove when better known and more plentiful, for it is comparatively new and is at present rare. It is a neat-habited bush, yet singularly graceful, the thin wiry shoots made last year branching out in every direction, and each crowded on the upper side with sessile clusters of the pure white blossoms. Thus, seen from above, the shrub is a mass of white radiating lines. It will apparently not grow much higher than three or four feet. The leaves are scarcely yet in evidence, but they become eventually one inch to 11/2 inches long, broader than in S. Thunbergi, with one or two teeth near the apex, or not toothed at all, and quite smooth. It is perfectly hardy, and the recent treacherous snaps of frost, which have damaged both the flowers and young shoots of several other spiræas, have not affected this at all. It can easily be propagated by layering or from cuttings .-

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